7. References

[1] D. H. Werner and R. Mittra, "Frontiers in Electromagnetics," IEEE press, chapters 1-3, 1999.

[2] B. B. Mandelbrot, "The Fractal Geometry of Nature", W. H. Freeman, New York, 1983.

[3] D. L. Jaggard, "On Fractal Electrodynamics", Recent Advances in Electromagnetic Theory New York, Springer-Verlag, pp. 183-224, 1990.

[4] C. Puente, J. Romeu, R. Pous, A. Cardana, "On the behavior of the Sierpinski multiband antenna",IEEE Transactions on Antennas and Propagation , vol. 46, pp 517-524, 1998.

[5] C. Puente, J. Romeu, R. Pous, J. Ramias, A. Hijazo, "Small but long Koch fractal monopole", IEE Electronic Letters, vol. 32, pp 9-10, 1998.

[6] C. Puente, J. Romeu and A. Cardama, "The Koch monopole: a small fractal antenna".IEEE Trans. On Antennas and Propagation,48, pp. 1173-1781, 2001.

[7] L. J. Chu, "Physical limitations of omni-directional antennas", J. Appl. Physics,vol. 19,pp-1163-1175, 1948.

[8] J. S. Mc Lean, "A Re-examination of the fundamental Limits on the Radiation Q of electrically small Antennas", IEEE trans. On Antennas and Propagation, vol. 69, pp- 672-676, 1996.

[9] S. Maci and G. G. Biffi (1997), "Dual-Frequency Patch Antennas," IEEE Antennas and Propagation Magazine, vol. 39, no. 6, pp.13-20, 1997.

[10] Y. Kim and D. L. Jaggard, "The fractal random array," *Proc. IEEE*, vol. 74, Sept. 1986, pp. 1278-1280.

[11] D. H. Werner and P. L. Werner, "Frequency independent features of self-similar fractal antennas," *Radio Sci.*, vol. 31, no. 6, Nov./Dec. 1996, pp. 1331-1343.

[12] C. Puente-Baliarda, and R. Pous, "Fractal design of multiband and low side-lobe arrays," *IEEE Trans. On Antennas and Prop.*, vol. AP-44, May 1996, pp. 730-739.

[13] D. H. Werner and R. L. Haupt, "Fractal construc- tions of linear and planar arrays," *Digest of IEEE APS/URSI International Symposium*, 1997, pp. 1968-1971.

[14] D. L. Jaggard and A. D. Jaggard "Cantor ring arrays," *Digest of IEEE AP-S/URSI International Symposium*, 1998, pp. 866-869.

[15] N. Cohen, "Fractal antenna applications in wireless telecommunications," *Proceedings of Electronics Industries Forum of New England*, 1997, pp. 43 - 49.

[16] C. Puente-Baliarda, J. Romeu, R. Pous, and A. Cardama, "On the behavior of the Sierpinski multiband fractal antenna," *IEEE Trans. on Antennas and Prop.*, Vol. AP-46, 1998, pp. 517-524.

[17] M. Sindou, G. Ablart, and C. Sourdois, "Multiband and wideband properties of printed fractal branched antennas," *Electronics Letters*, Vol. 35, No. 3, February 1999, pp. 181-182.

[18] X. Yang and L. Susman, "Wideband printed circuit fractal loop antennas," *Digest of IEEE AP/URSI Symposium*, 1999. M. Schroeder, *Fractals, Chaos, Power Laws*, Freeman, 1990.

[19] N.Cohen, "Fractal and shaped dipoles", Communication Quart. pp. 25–36, Spring, 1996.

[20] C. P. Baliarda, J. Romeu, and A. Cardama, "The Koch monopole: A small fractal antenna", IEEE Transactions on Antennas and Propagation, vol. AP- IX, no. 11, pp. 1773–1781, Nov. 2000.

[21] C. Borja and J. Romeu, "On the behavior of Koch island fractal boundary microstrip patch antenna" Transactions on Antennas and Propagation, vol. 51, no. 6, Jun. 2003.

[22] D. Anagnostou, M. T. Chryssomallis, J. C. Lyke, and C. G. Christodoulou, "A CPW Koch dipole slot Antenna", Proceeding IEEE Topical Conference Wireless Communication Technology, Oct. 15–17, 2003.

[23] C. Puente and R. Pous, "Fractal Design of Multiband and Low Side-Lobe Arrays", Transactions on Antennas and Propagation, vol. 44, no. 5, pp. 730–739, May 1996.

[24] J. Anguera, C. Puente, C. Borja, and J. Soler, "Fractal-shaped antennas: A review", in Wiley Encyclopedia of RF and Microwave Engineering, K. Chang, Ed. New York: Wiley, vol. 2, 2005.

[25] Mircea V. Rusu and Roman Baican, "Fractal Antenna Applications", University of Bucharest, and Transilvania" University, Brasov, Romania.

[26] Carles Puente Baliarda, Jordi Romeu and Angel Cardama, "The Koch Monopole: A Small Fractal Antenna", IEEE Transactions on Antennas and Propagation, Vol. 48, No. 11, November 2000.

[27] Krishna, D. D., A. R Chandran, and C. K. Anandan, "A compact dual frequency antenna with sierpinski gasket based slots", *Proceedings of the 10th European Conf. on Wireless Technology*, EuMA, Munich, Germany, Oct. 2007.

[28] Krishna, D. D., M. Gopikrishna, and C. K. Anandan, "CPW-fed Koch fractal slot antenna for WLAN/WiMAX applications," *IEEE Ant. and Wireless Propag. Lett.*, Vol. 7, 389-392, 2008.

[29] Chang, D.-C., B.-H. Zeng, and J.-C. Liu, "CPW-fed circular fractal slot antenna design for dual-band applications," *IEEE Trans. Ant. and Propag.*, Vol. 56, No. 12, 3630-3636, Dec.2008.

[30] Choukiker, Y. K., S. Rai, and S. K. Behera, "Modified half-circle fractal antenna using DC theorem for 2.4-5.2 GHz WLAN application," *Proceedings of National Conference on Communication*, IISc, Banglore, Jan. 2011.

[31] Aziz, R. S., M. A. Alkanhal, and A. F. A. Sheta, "Dual band fractal monopoles," *Proceedings of Saudi Int. Electronics, Comm. and Photonics Conf., SIECPC*, Riyadh, Saudi Arabia, Apr. 2011.

[32] Arora, P. and B. S. Dhaliwal, "Parameter estimation of dual band elliptical fractal patch antenna using ANN," *Proceedings of Int. Conf. on Devices and Comm., ICDeCom*, Mesra, Feb. 2011.

[33] Hong, T., S.-X. Gong, Y. Liu, and W. Jiang "Monopole antenna with quasi-fractal slotted ground plane for dual-band applications," *IEEE Ant. and Wireless Propag. Lett.*, Vol. 9, 595-598, 2010.

[34] Falconer, K., *Fractal Geometry: Mathematical Foundations and Applications*, 2nd Edition, Wiley, 2003.

[35] J. P. Gianvittorio and Y. Rahmat-Samii," Fractals Antennas: A novel Antenna iniaturization Technique, and Applications", IEEE Antennas and Propagation Magazine, vol. 44, pp 20- 36, 2002.

[36] N. A. Saidatul, A. A. H. Azremi, R. B. Ahmad, P. J. Soh, and F. Malek, "Multiband fractal planar inverted F antenna (F-PIFA) for mobile phone application," *Progress in Electromagnetic Research (PIER)*, vol. 14, pp. 127-148, 2009.

[37] P. J. Soh, G. A. E. Vandenbosch, S. L. Ooi, and M. R. N. Husna, "Wearable dual-band Sierpinski fractal PIFA using conductive fabric," *Electronics Letters*, vol. 47, pp. 365-367, 2011.

[38] S. N. Shafie, I. Adam, and P. J. Soh, "Design and Simulation of a Modified Minkowski Fractal Antenna for Tri-Band Application," in *Mathematical/Analytical Modelling and Computer Simulation (AMS), 2010 Fourth Asia International Conference on*, 2010, pp. 567-570.

[39] C. P. Baliarda, J. Romeu, and A. Cardama, "The Koch monopole: a small fractal antenna," *Antennas and Propagation, IEEE Transactions on*, vol. 48, pp. 1773-1781, 2000.

[40] S. R. Best, "On the resonant properties of the Koch fractal and other wire monopole antennas," *Antennas and Wireless Propagation Letters, IEEE*, vol. 1, pp. 74-76, 2002.

[41] A. Sundaram, M. Maddela, and R. Ramadoss, "Koch-Fractal Folded-Slot Antenna Characteristics," *Antennas and Wireless Propagation Letters, IEEE*, vol. 6, pp. 219-222, 2007.

[42] S. R. Best, "On the performance properties of the Koch fractal and other bent wire monopoles," *Antennas and Propagation, IEEE Transactions on*, vol. 51, pp. 1292-1300, 2003.

[43] B. Mirzapour and H. R. Hassani, "Size reduction and bandwidth enhancement of snowflake fractal antenna," *Microwaves, Antennas & Propagation, IET*, vol. 2, pp. 180-187, 2008.

[44] M. N. A. Karim, M. K. A. Rahim, H. A. Majid, O. B. Ayop, M. Abu, and F Zubir, "Log periodic fractal Koch antenna for UHF band applications," *Progres in Electromagnetic Research (PIER)*, vol. 100, pp. 201-218, 2010.